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Indian Standard

CODE OF PRACTICE FOR EXPORT PACKAGING OF GLASS CONTAINER WARE

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*Indian Standard*CODE OF PRACTICE FOR EXPORT
PACKAGING OF GLASS CONTAINER WARE

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Indian Standard

CODE OF PRACTICE FOR EXPORT PACKAGING OF GLASS CONTAINER WARE

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 December 1977, after the draft finalized by the Glass Containers Sectional Committee had been approved by the Marine, Cargo Movement and Packaging Division Council.

0.2 Due to fragile nature of glass, special precautions are needed in adopting packaging methods and materials for glass containers ware for export. Also more often than not importing countries impose certain restrictions on the mode of packaging of glass container packed products.

0.3 The need for formulating this code of practice for export packaging of glass container ware has been felt in view of the wide variety of goods differing in their characteristics, size and value. This code applies to empty and filled glass container packed with goods, such as food products, drugs, chemicals, cosmetics, wines and toiletry preparations. This code, however, excludes packing method of inflammable, highly poisonous and corrosive solids, semi-solids and liquids in glass containers.

0.4 The recommended practice for packaging glass and glassware, including container ware for transport within the country has been given separately in IS:6945-1973*.

1. SCOPE

1.1 This standard lays down the recommended practices for export packaging of glass container ware both empty and filled, for transport by rail, road, air or ship or any combination of these.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in IS:1382-1961†, IS:2771 (Part I)-1977‡, IS:2771 (Part II)-1975§, IS:4261-1967||, IS:6703-1972¶, and IS:7186-1973** shall apply.

*Code of practice for packaging glass and glassware.

†Glossary of terms relating to glass industry.

‡Specification for fibreboard boxes: Part I Corrugated fibreboard boxes (first revision).

§Specification for fibreboard boxes: Part II Solid fibreboard boxes (first revision).

||Glossary of terms relating to paper and pulp based packaging materials.

¶Glossary of wooden packaging terms.

**Glossary of terms relating to paper and flexible packaging.

3. PACKING REQUIREMENTS

3.0 The packing requirements for various groups of glass container ware are given below.

3.1 Preserved Fruit Jars (Food Product Bottles) — Preserved fruit jars and bottles either empty or containing food items, such as sauce, squash, syrup, coffee, etc, shall be packed in fibreboard boxes of suitable construction, with liners and partitions or in wooden containers with adequate cushioning materials. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.1.1 The slotted partitions shall be made from 3 or 5 ply corrugated fibreboard or moulded corrugated board, the height of the partitions shall be equal to the full height of the jar or bottle. Liners shall be in one piece, covering the sides and ends of the box. Liners shall be of the same height as partitions and fabricated of corrugated fibreboard or moulded corrugated board. Top and bottom liners shall be fabricated of corrugated fibreboard or moulded corrugated board, and not more than 5 mm smaller than the inside length and width of the box. Layers of jars/bottles shall be separated by sheets of corrugated fibreboard or moulded corrugated board.

3.2 Pharmaceuticals, Chemicals, Toiletry and Cosmetic Preparations Bottles — Bottles containing liquids, solid or semi-solid pharmaceuticals, chemicals and toiletry goods and empty bottles for these products shall be packed in fibreboard boxes of suitable construction with liners and partitions or wooden boxes with adequate partitioning and cushioning material. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.2.1 Bottles not individually packed in cartons shall be packed in slotted partitions made from 3 or 5 ply corrugated fibreboard or moulded corrugated board. The height of the partitions shall be equal to the full height of the bottles. Liners shall be in one piece and of the same height as partitions and fabricated of corrugated fibreboard or moulded corrugated board. Top and bottom liners shall be fabricated of corrugated fibreboard or moulded corrugated board and not more than 5 mm smaller than the inside length and width of the box.

3.2.2 The pharmaceutical and toiletry product bottles primarily packed individually in a paperboard carton up to 50 ml bottles and with inner liners for bottles above 50 ml capacity (wherever necessary) shall be packed either in outer bulk fibreboard boxes with honeycomb partitioning

and liners or wooden boxes with suitable partitioning and cushioning materials. Paddy straw or grass should not be used as cushioning material. If corrugated fibreboard box is used as a primary carton, the liners/cushioning materials used in the bulk containers may be avoided.

3.2.3 Bottles in suitable requisite numbers to meet a retail pack-intermediate pack shall be directly packed in a paperboard carton with partitions and/or liners of corrugated fibreboard or moulded corrugated board or in corrugated fibreboard boxes with partitions. These intermediate packs shall then be packed in outer bulk packs.

3.3 Pharmaceutical Vials — Vials not packed in cartons shall be packed depending on the quantity in 3, 5 or 7 ply corrugated fibreboard boxes, with slotted partitions made from corrugated fibreboard or moulded corrugated board (wherever necessary). The height of partitions shall be equal to the height of the vial. Liners shall be in one piece, covering the sides and ends of the box. Liners shall be of the same height as partitions and fabricated of corrugated fibreboard or moulded corrugated board. Top and bottom liners shall be fabricated of corrugated fibreboard or moulded corrugated board, and not more than 5 mm smaller than the inside length and width of the box. Layers of vials shall be separated by sheets of paperboard, corrugated board or moulded corrugated board.

3.3.1 Filled vials primarily packed individually in a paperboard carton shall be packed either in outer fibreboard boxes with liners or wooden containers with suitable cushioning materials. Paddy straw or grass should not be used, as cushioning materials.

3.3.2 Filled vials not packed individually shall be packed in 100 numbers in one intermediate corrugated fibreboard or moulded corrugated board box or in a paperboard carton with slotted partitions of corrugated fibreboard or moulded corrugated fibreboard. These intermediate packs shall then be packed in outer bulk pack of 3 or 5 ply corrugated board box or wooden container with adequate cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.4 Ampoules — Ampoules shall be packed in paperboard/fibreboard cartons with slotted partitions and where necessary cotton as cushioning material or in contour fit paperboard or thermoformed plastic containers.

3.4.1 The primary cartons of ampoules shall be packed in outer bulk packs made of 3 or 5 ply fibreboard boxes with liners and partitions or wooden containers with adequate cushioning materials. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.5 Beer Bottles — Twelve beer bottles (filled) in a $4 \times 3 \times 1$ manner or suitable number of empty bottles shall be packed in a 3 or 5 ply corrugated fibreboard box either designed to have auto slots or a regular box with slotted partitions made from 3 or 5 ply corrugated fibreboard or in wooden containers with adequate cushioning materials. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.6 Other Alcoholic Bottles — Distillery Products

3.6.1 180-ml Glass Bottles — Forty-eight filled bottles in a $6 \times 8 \times 1$ manner or suitable number of empty bottles shall be packed in a 5 ply corrugated fibreboard box of suitable construction with liners and partitions or in a wooden container with adequate cushioning materials. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.6.2 375-ml Glass Bottles — Twenty-four bottles in a $6 \times 4 \times 1$ manner or suitable number of empty bottles shall be packed in a 5 ply corrugated fibreboard box of suitable construction with liners and partitions or in a wooden container with adequate partitioning and cushioning materials. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.6.3 750-ml Glass Bottles

3.6.3.1 Twelve filled bottles in $4 \times 3 \times 1$ manner or suitable number of empty bottles not individually packed shall be packed in a 5 ply corrugated fibreboard box of suitable construction with liners and partitions or in wooden containers with adequate partitioning and cushioning materials. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.6.3.2 750-ml filled bottles individually packed in paperboard cartons shall be packed in 12 numbers in a $4 \times 3 \times 1$ manner in 5 ply corrugated fibreboard box of suitable construction with liners/partitions or in wooden containers with adequate cushioning materials. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof

externally, the inner waterproof liner may be avoided. If the primary cartons are made from corrugated fibreboard, the use of liners/cushioning materials in the bulk containers may be avoided.

3.7 Ink Bottles — The ink bottles filled or empty shall be packed in fibreboard boxes of suitable construction with liners and partitions or in wooden containers with adequate cushioning materials. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproof materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.7.1 The filled bottles shall be primarily packed individually in a paperboard carton. These primary packs shall then be packed in fibreboard boxes of suitable construction with liners or partitions or in wooden containers with adequate cushioning materials. It is, however, recommended not to use paddy straw or grass as cushioning materials. The bulk packs shall be lined all along the inner surface with suitable waterproofing materials. In the event of using a fibreboard box made waterproof externally, the inner waterproof liner may be avoided.

3.7.2 The slotted partitions shall be made from 3 or 5 ply corrugated fibreboard or moulded corrugated board. The height of the partitions shall be equal to the height of the unit carton. Liners shall be in one piece covering the sides and ends of the box and shall be of the same height as partitions and fabricated of corrugated fibreboard or moulded corrugated board. Top and bottom liners shall be fabricated of corrugated fibreboard or moulded corrugated board and not more than 5 mm smaller than the inside length and width of the box. Layers of unit cartons shall be separated by sheets of corrugated fibreboard or moulded corrugated board.

3.8 The fibreboard boxes depending upon style shall be sealed by applying a suitable adhesive in between the flap surfaces (wherever necessary) and then the box shall be closed by suitable adhesive/gummed tape. The box shall be reinforced by two non-metallic straps in the girth direction. If metallic straps are used suitable corners shall be provided to avoid the strap cutting the box. For wooden bulk packs, it is, however, recommended to use metallic straps.

3.9 The fibreboard boxes/wooden boxes shall conform to IS:1503-1967*, IS:2771 (Part I)-1977†, and IS:2771 (Part II)-1975‡.

*Specification for wooden packing cases (*first revision*).

†Specification for fibreboard boxes: Part I Corrugated fibreboard boxes (*first revision*).

‡Specification for fibreboard boxes: Part II Solid fibreboard boxes (*first revision*).

4. TESTING

4.1 The filled and closed bulk packs shall be tested for their transport-worthiness as prescribed in IS:7028-1973* covering the following tests:

- a) Drop,
- b) Vibration,
- c) Rolling,
- d) Impact,
- e) Static stack load, and
- f) Water spray.

The bulk packs shall pass these tests.

5. MARKING

5.1 In addition to the normal marking required by the importer each box/container shall be marked with 'GLASS WITH CARE' and 'THIS SIDE UP' in accordance with IS:1260 (Part II)-1973†.

5.1.1 The package may also be marked with country of origin, address of importer, name of the product, lot or batch No. and any other handling instructions as given in IS:1260 (Part II)-1973†.

5.1.2 Attention is drawn to the special markings specified by the carriers required to be put on the boxes for certain glass container packed goods. In this regard IATA, IMCO and UIC regulation may be consulted.

*Performance tests for complete filled transport packages.

†Pictorial marking for handling of goods: Part II General goods (*first revision*).

INDIAN STANDARDS
ON
GLASS CONTAINERS

IS:

1106-1957 Distilled water glass bottles
1107-1974 Aerated water glass bottles, crown cork type (*revised*)
1108-1975 Pharmaceutical glass containers (*second revision*)
1494-1971 Glass containers for preserved fruits industry and domestic fruit preserves (*first revision*)
1662-1974 Glass liquor bottles (*second revision*)
1945-1961 Glass bottles for fluid inks
2091-1975 Glass bear bottles (*first revision*)
2351-1963 Marble stoppered aerated water glass bottles
5715-1970 Glass carboys
5851-1970 Finishes with external screw thread for glass containers and gauges for inspection of screw closures
6654-1972 Glossary of glass packaging terms
6945-1973 Code of practice for packaging glass and glassware
7511-1974 Summary sheet on glass containers neck finishes

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